**IN THE CLAIMS:**

1. (previously amended) A compound which consists of polyurethane bound covalently to a sulphated hyaluronic acid derivative.

2. (previously amended) The polyurethane according to claim 1, wherein the said polyurethane is formed starting from 4,4'-methylenebis (phenyl isocyanate).

3. (canceled)

4. (previously amended) The polyurethane according to claim 1, wherein the said sulfated hyaluronic acid derivative is selected from the group consisting of:

$A_2$) O-sulphated hyaluronic acid derivative, and

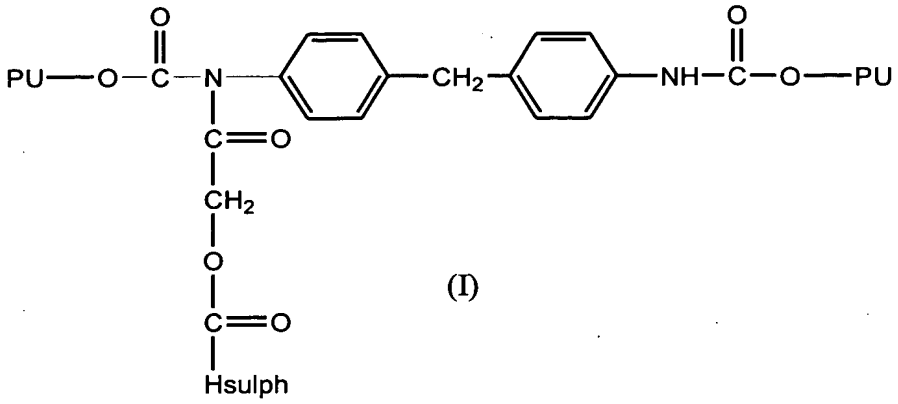
$B_2$) N-sulphated hyaluronic acid derivative.

5. (previously amended) The polyurethane according to claim 4, wherein the hyaluronic acid derivatives used to prepare the said sulphated hyaluronic acid $A_2$ and $B_2$ are selected from the group consisting of :

crosslinked esters containing at least one free carboxylic function and the remaining carboxylic functions are esterified with the alcoholic function of the same hyaluronic acid molecule or of a different hyaluronic acid molecule,

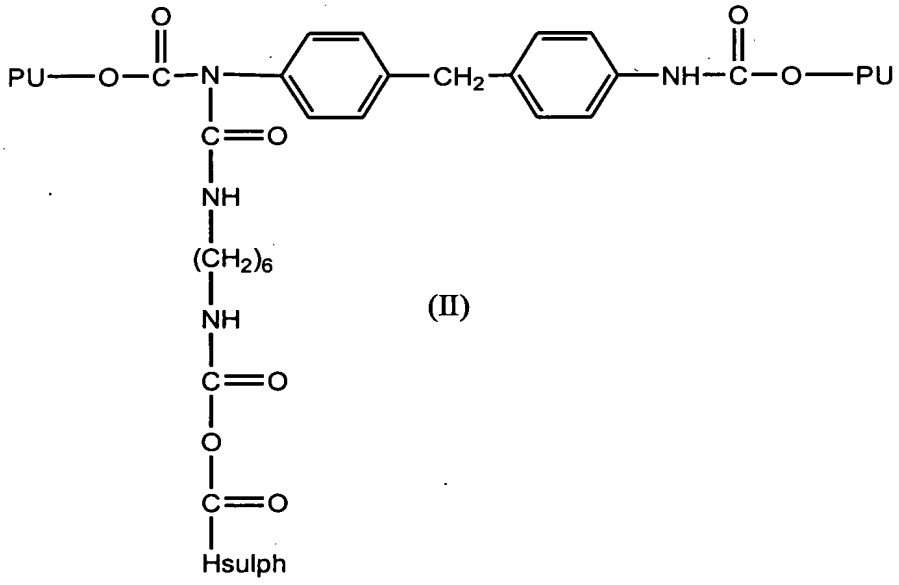
- the partial esters of hyaluronic acid containing at least one free carboxylic function and the remaining carboxylic function esterified with alcohols of the aliphatic, aromatic, arylaliphatic, cycloaliphatic, or heterocyclic series, and
- the partial crosslinked esters containing at least one free carboxylic function reacted with an aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic polyalcohol, and wherein crosslinking is thereafter generated by means of spacer chains.

6. (previously amended) The polyurethane according to claim 1 of formula (I)




(I)

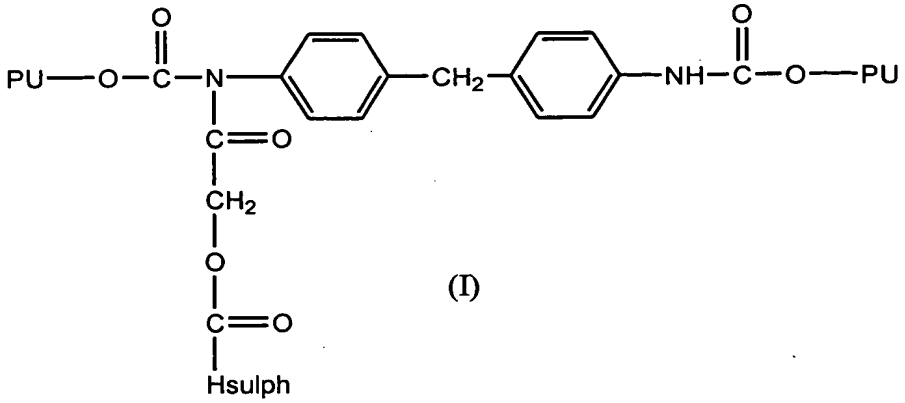
or formula (II)




(II)

wherein PU is a residue of the polyurethane chain, Hsulph is a residue of the sulphated hyaluronic acid or a residue of a sulphated hyaluronic acid derivative containing at least one free carboxylic function.

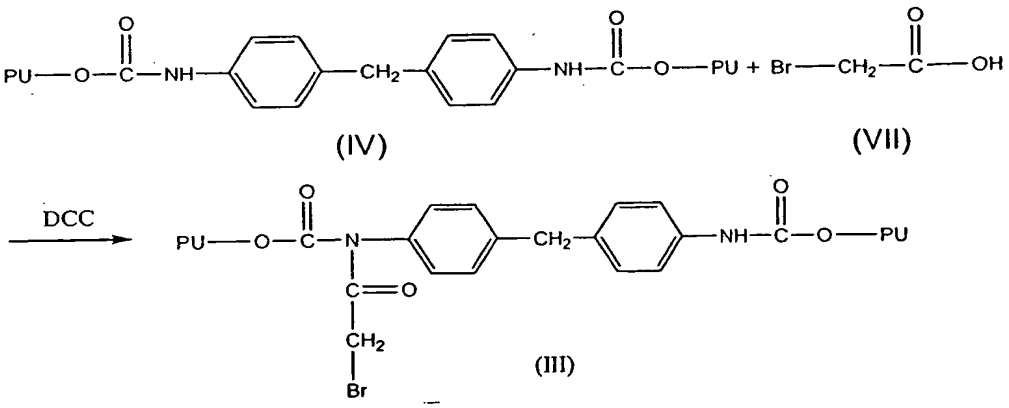
7. (previously amended) A process of preparing the polyurethane of formula (I)



(I)

wherein PU and Hsulph are as defined in claim 6, comprising the following steps:

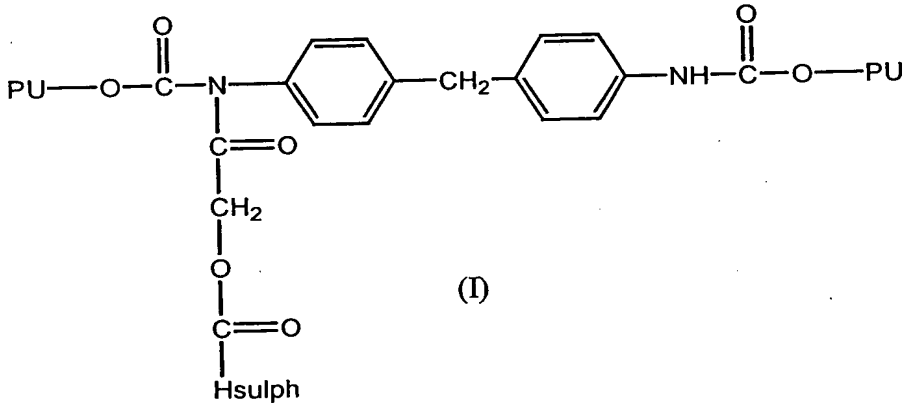
i) the polyurethane (IV) is reacted with bromoacetic acid (VII) in the presence of N,N'- dicylclohexylcarbodiimide (DCC), to obtain the adduct of formula (III)



(IV) (VII)

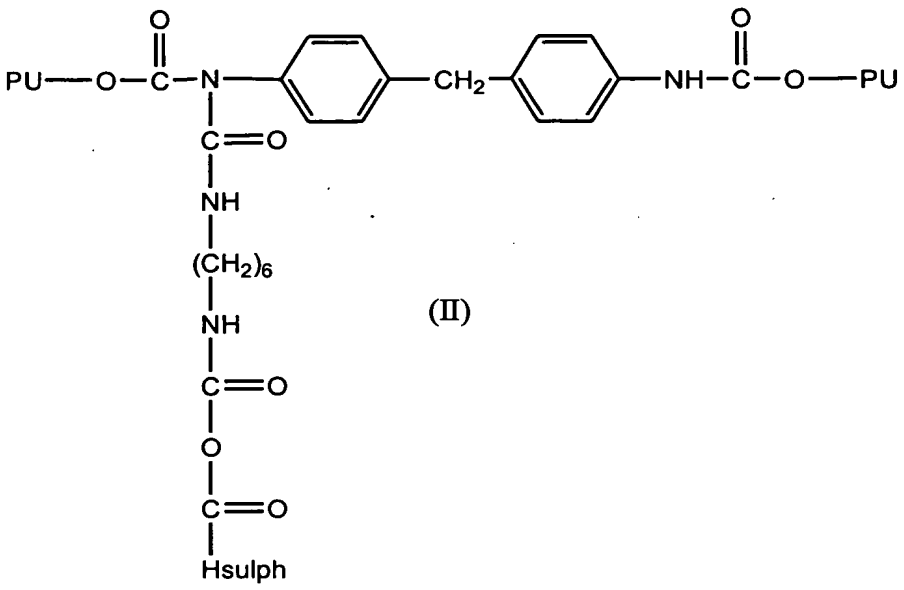
(III)

ii) the adduct (III) coming from step i) is reacted with HOOC-Hsulph, wherein Hsulph is defined as above, thereby obtaining the compound of formula (I)




(I)

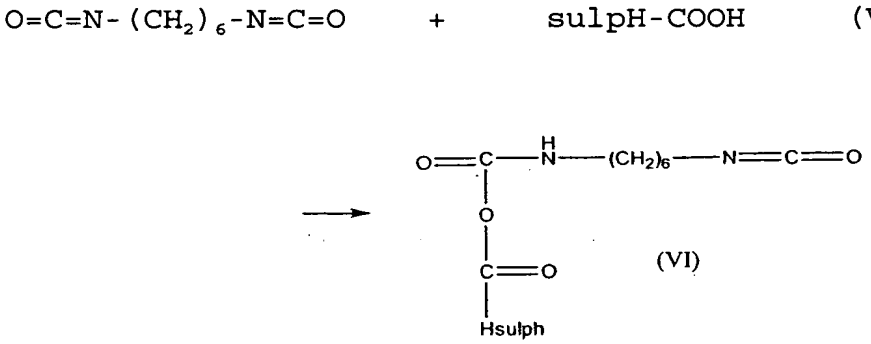
8. (previously amended) A process for preparing the polyurethane of formula (II)



(II)

wherein PU and Hsulph are as defined in claim 6, comprising the following steps:

i') HOOC-Hsulph is reacted with hexamethylenediisocyanate (HMDI) (V) to obtain the adduct Formula (VI)

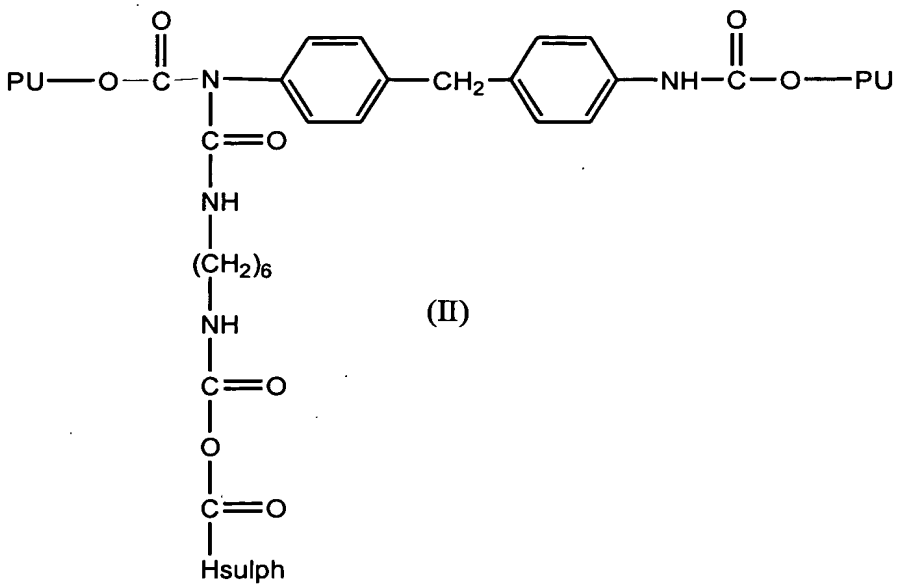


(V)

(VI)

wherein Hsulph is defined as above;

ii') the adduct (VI) coming from step i') is reacted with the polyurethane (IV) to obtain the said polyurethane of formula (II)




(II)

9. (previously amended) Haemocompatible material comprising at least one polyurethane according to claim 1.

10. (previously amended) Haemocompatible material consisting of at least one polyurethane according to claim 1.

11. (original) The haemocompatible material according to claim 9, further comproising a pharmaceutically active substance.

12. (previously amended) The haemocompatible material according to claim 11, wherein said pharmaceutically active substance is selected from the group consisting of antibiotics, anti-infective, antimicrobial, antiviral, cytostatic, antitumoral,

anti inflammatory, wound healing agents, anesthetics, cholinergic or adrenergic agonists or antagonists, antithrombotic, anticoagulant, haemostatic, fibrinolytic, thrombolytic agents, proteins or their fragments, peptides, polynucleotide, growth factors, enzymes and vaccines.

13. (currently amended) The haemocompatible material according to claim 9, further comprising at least one natural[[,]] or synthetic polymer.

14. (previously amended) The haemocompatible material according to claim 13, wherein said natural polymer is selected from the group consisting of collagen, collagen coprecipitates and glycosamino glycans, cellulose, polysaccharides in the form of chitin, chitosan, pectin or pectic acid, agar, agarose, xanthane, gellan, alginic acid or the alginates, polymannan or polyglycans, starch and natural gums.

15. (previously amended) The haemocompatible material according to claim 13, wherein said polymer is selected from the group consisting of collagen cross linked with aldehydes, dicarboxylic acids or their halides, diamines, derivatives of cellulose, hyaluronic acid, chitin or chitosan, gellan, xanthane, pectin or pectic acid, polyglycans, polymannan, agar, agarose, natural gum and glycosamino glycans.

16. (Previously amended) The haemocompatible material according to claim 13, wherein said synthetic polymer is selected from the group consisting of polylactic acid, polyglycolic acid, polydioxanes, polyphosphazenes, polysulphonic resisn and PTFE.

17. (previously amended) The haemocompatible material according to claim 9, in the form of sponges, films, membranes, threads, tampons, non-woven fabrics, microspheres, nanospheres, gauzes, gels or guide channels.

18. (previously amended) Industrial or medical articles or devices made with or coated with the haemocompatible material according to claim 9.

19. (previously amended) The industrial or medical articles or devices coated with the haemocompatible material according to any of claims 9-16 wherein said articles or devices are selected from the group consisting of catheters, guide channels, probes, cardiac valves, soft tissue prostheses, prostheses of animal origin, cardiac valves from pigs, artificial tendons, bone replacements or cardiovascular prostheses, contact lenses, blood oxygenators, artificial kidneys, hearts, pancreas and livers, blood bags, syringes, surgical instruments, filtration systems, laboratory instruments, containers for cultures and for cell and tissue regeneration, supports for peptides, proteins and antibodies.

20. (previously amended) A compound which consists of a polyurethane bound covalently to sulphated hyaluronic acid derivative obtained by a process comprising supplementing a polyurethane solution with a salt of the said sulphated hyaluronic acid or of sulphated hyaluronic acid derivative, or with a solution thereof.

21. (previously amended) The polyurethane according to claim 20, wherein the said polyurethane is formed starting from 4,4'-methylenebis (phenyl isocyanate).

22. (canceled)

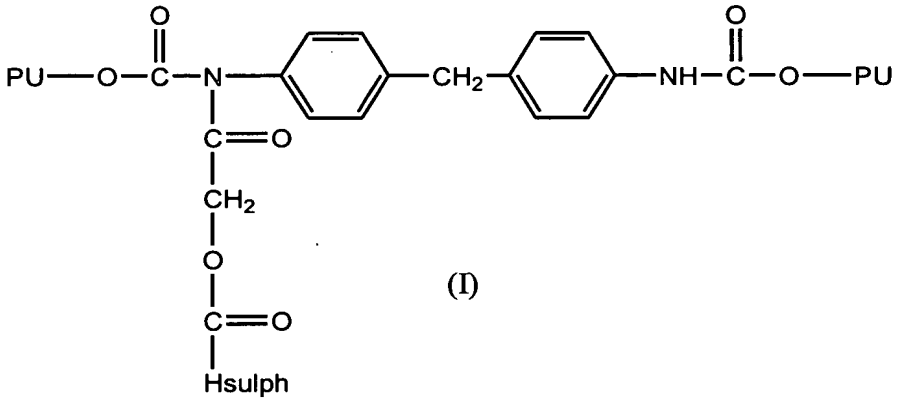
23. (currently amended) The polyurethane according to ~~any of~~ claim[[s]] 20 [[or 21]], wherein the said sulphated hyaluronic acid derivative is selected from the group consisting of:
$A_2$) O-sulphated hyaluronic acid, and
$B_2$) N-sulphated hyaluronic acid.

24. (previously amended) The polyurethane according to claim 23, wherein the hyaluronic acid derivatives used to prepare

the said sulphated hyaluronic acid derivatives $A_2$ and $B_2$ are selected from the group consisting of:

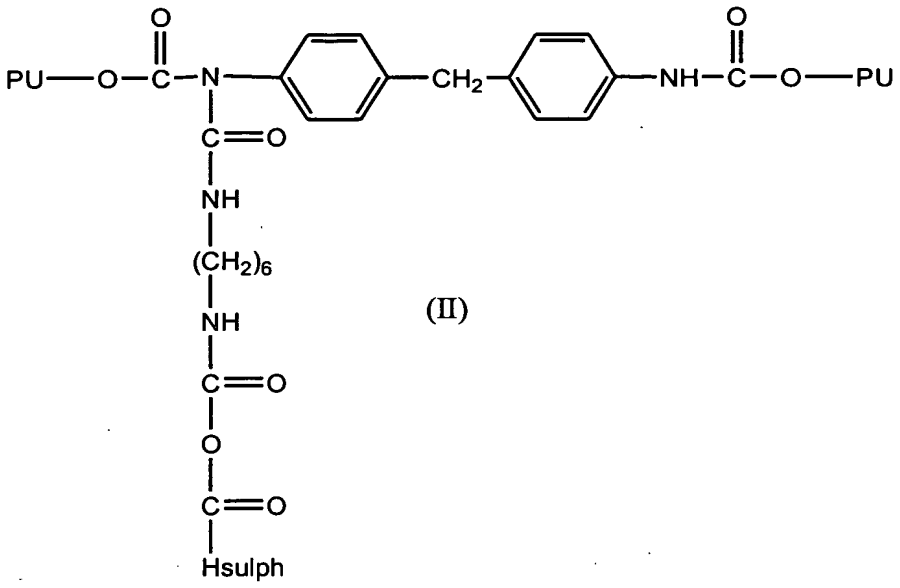
- the partial esters of hyaluronic acid containing at least one free carboxylic function and the remaining carboxylic function esterified with alcohols of the aliphatic, aromatic, arylaliphatic, cycloaliphatic, heterocyclic series, and
- the partial crosslinked esters containing at least one free carboxylic function and the remaining carboxylic functions are esterified with the alcoholic function of the same hyaluronic acid molecule or of a different hyaluronic acid molecule,
- the partial crosslinked esters containing at least one free carboxylic function reacted with an aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic polyalcohol, and wherein crosslinking is thereafter generated by means of spacer chains.

25. (previously added) The polyurethane according to any of claims 20, 21 or 24 of formula (I)




(I)

or formula (II)




(II)

wherein PU is a residue of the polyurethane chain, Hsulph is a residue of the sulphated hyaluronic acid or a residue of a sulphated hyaluronic acid derivative containing at least one free carboxylic function.

26. (previously added) Haemocompatible material comprising at least one polyurethane according to any of claims 20, 21 or 24.

27. (previously added) Haemocompatible material consisting of at least one polyurethane according to any of claims 20, 21 or 24.

28. (previously added) The haemocompatible material according to claim 26, further comprising a pharmaceutically active substance.

29. (previously added) The haemocompatible material according to claim 28, wherein said pharmaceutically active substance is selected from the group consisting of antibiotics, antiinfective, antimicrobial, antiviral, cytostatic, antitumoral, anti-inflammatory, wound healing agents, anaesthetics, cholinergic or adrenergic agonists or antagonists, antithrombotic, anticoagulant, haemostatic,

fibrinolytic, thrombolytic agents, proteins or their fragments, peptides, polynucleotides, growth factors, enzymes and vaccines.

30. (previously added) The haemocompatible material according to ~~any of~~ claim[[s]] [[28 or]] 29, further comprising at least one natural, synthetic or semisynthetic polymer.

31. (previously added) The haemocompatible material according to claim 30, wherein said natural polymer is selected from the group consisting of collagen, collagen coprecipitates and glycosamino glycans, cellulose, polysaccharides in the form of gels such as chitin, chitosan, pectin or pectic acid, agar, agarose, xanthane, gellan, alginic acid or the alginates, polymannan or polyglycans; starch and natural gums.

32. (previously added) The haemocompatible material according to claim 30, wherein said semisynthetic polymer is selected from the group consisting of collagen crosslinked with aldehydes, dicarboxylic acids or their halides, diamines, derivatives of cellulose, hyaluronic acid, chitin or chitosan, gellan, xanthane, pectin or pectic acid, polyglycans, polymannan, agar, agarose, natural gum and glycosamino glycans.

33. (previously added) The haemocompatible material according to claim 30, wherein said synthetic polymer is selected from the group consisting of polylactic acid, polyglycolic acid, polydioxanes, polyphosphazenes, polysulphonic resins and PTFE.

34. (currently amended) The haemocompatible material according to ~~any of~~ claim[[s]] 28~~, 29, 31, 32 or 33~~ in the form of sponges, films, membranes, threads, tampons, non-woven fabrics, microspheres, nanospheres, gauzes, gels or guide channels.

35. (currently amended) Industrial or medical articles or devices made with or coated with the haemocompatible material

according to ~~any of~~ claim[[s]] ~~28, 29, 31, 32 or~~ 33.

36. (previously added) The industrial or medical articles or devices according to claim 35, wherein said articles or devices are selected from the group consisting of catheters, guide channels, probes, cardiac valves, soft tissue prostheses, prostheses of animal origin, cardiac valves from pigs, artificial tendons, bone replacements or cardiovascular prostheses, contact lenses, blood oxygenators, artificial kidneys, hearts, pancreas and livers, blood bags, syringes, surgical instruments, filtration systems, laboratory instruments, containers for cultures and for cell and tissue regeneration, supports for peptides, proteins and antibodies.

37. (previously added) The polyurethane according to claim 1, wherein the said polyurethane has an average molecular weight of 180,000 Da.

38. (previously added) The polyurethane according to claim 20, wherein the said polyurethane has an average molecular weight of 180,000 Da.